AMENDMENT TO THE CLAIMS

The following claim listing replaces all prior listings and versions of the claims:

LISTING OF CLAIMS

1. (Currently Amended) A spring steel wire having a tempered martensitic structure brought about by quenching-tempering following patenting and drawing, the spring steel wire comprising:

based on mass %, C: 0.50-0.75%, Si: 1.80-2.70%, Mn: 0.1-0.7%, Cr: 0.70-1.50%, Co: 0.02-1.0%, and balance consisting of Fe and impurities;

a 40% or higher reduction of area after quenching-tempering; and

a 1,000 MPa or higher shear yield stress when evaluated under condition in which the wire is subjected to heat treatment for at least 2 hours at a temperature ranging from 420°C to 480°C.

2. (Cancelled)

3. (Currently Amended) ~~The spring steel wire according to claim 1 consisting of,~~ A spring steel wire having a tempered martensitic structure brought about by quenching-tempering following patenting and drawing, the spring steel wire comprising:

based on mass %, C: 0.50-0.75%, Si: 1.80-2.70%, Mn: over 0.7-1.5%, Cr: 0.70-1.50%, and balance consisting of Fe and impurities without including Ni and V;

a 40% or higher reduction of area after quenching-tempering; and

a 1,000 MPa or higher shear yield stress when evaluated under condition in which the wire is subjected to heat treatment for at least 2 hours at a temperature ranging from 420°C to 480°C.

4. (Cancelled)

5. (Currently Amended) The spring steel wire according to claim 1, further comprising ~~consisting of~~, based on mass %[[;]],

~~C: 0.50-0.75%, Si: 1.80-2.70%, Mn: 0.1-0.7%, Cr: 0.70-1.50%, Co: 0.02-1.00%;~~

at least one element selected from the group of 5 elements consisting of V: 0.05-0.50%, Mo: 0.05-0.50%, W: 0.05-0.15%, Nb: 0.05-0.15% and Ti: 0.01-0.20%~~; and~~

~~balance consisting of Fe and impurities~~.

6. (Currently Amended) The spring steel wire according to claim 3, further comprising ~~1 consisting of~~, based on mass %[[;]] ,

~~C: 0.50-0.75%, Si: 1.80-2.70%, Mn: over 0.7-1.5%, Cr: 0.70-1.50%;~~

at least one element selected from the group of [[5]] 4 elements consisting of ~~V: 0.05-0.50%,~~ Mo: 0.05-0.50%, W: 0.05-0.15%, Nb: 0.05-0.15% and Ti: 0.01-0.20%~~; and~~

~~balance consisting of Fe and impurities~~.

7. (Cancelled)

8. (Currently Amended) The spring steel wire according to claim 1, further comprising austenite grains (prior austenite grains) which have an average grain size in the range of 3.0-7.0 μm.

9. (Previously presented) A spring manufactured from the spring steel wire according to claim 1.

10. (Original) A spring manufactured from the spring steel wire according to claim 8.

11. (Withdrawn) A method of manufacturing a spring steel wire, comprising the steps of:

patenting a steel consisting of chemical compositions given below;

drawing the thus patented steel into a steel wire; and

subjecting the resultant steel wire to quenching-tempering;

wherein said patenting process comprises:

an austenization step in which the steel is heated at 900-1,050°C for 60 to 180 seconds; and

an isothermal transformation step in which the thus austenized steel is heated at 600-750°C for 20 to 100 seconds;

Chemical compositions (based on mass %):

C: 0.50-0.75%, Si: 1.80-2.70%, Mn: 0.1-0.7%, Cr: 0.70-1.50%, Co: 0.02-1.00%, and remnants consisting of Fe and impurities.

12. (Withdrawn) A method of manufacturing a spring steel wire, comprising the steps of:

patenting a steel consisting of chemical compositions given below;

drawing the thus patented steel into a steel wire; and

subjecting the resultant steel wire to quenching-tempering;

wherein said patenting process comprises:

an austenization step in which the steel is heated at 900-1,050°C for 60 to 180 seconds; and

an isothermal transformation step in which the thus austenized steel is heated at 600-750°C for 20 to 100 seconds;

Chemical compositions (based on mass %):

C: 0.50-0.75%, Si: 1.80-2.70%, Mn: over 0.7-1.5%, Cr: 0.70-1.50%, and remnants consisting of Fe and impurities.

13. (Withdrawn) A method of manufacturing a spring steel wire, comprising the steps of:

patenting a steel consisting of chemical compositions given below;

drawing the thus patented steel into a steel wire; and

subjecting the resultant steel wire to quenching-tempering;

wherein said patenting process comprises:

an austenization step in which the steel is heated at 900-1,050°C for 60 to 180 seconds; and

an isothermal transformation step in which the thus austenized steel is heated at 600-750°C for 20 to 100 seconds;

Chemical compositions (based on mass %):

C: 0.50-0.75%, Si: 1.80-2.70%, Mn: over 0.7-1.5%, Cr: 0.70-1.50%, at least one element of Ni: 0.1-1.0% and Co: 0.02-1.00%, and remnants consisting of Fe and impurities.

14. (Previously Presented) The spring steel wire according to claim 1, wherein the patenting comprises austenitization step in which a steel is heated at 900-1,050°C for 60 to 180 seconds and an isothermal transformation step in which thus austenitizied steel is heated at 600-750°C for 20 to 100 seconds.

15. (New) The spring steel wire according to claim 3 comprising austenite grains (prior austenite grains) which have an average grain size in the range of 3.0-7.0 μm.

16. (New) A spring manufactured from the spring steel wire according to claim 3.

17. (New) A spring manufactured from the spring steel wire according to claim 15.

18. (New) The spring steel wire according to claim 3, wherein the patenting comprises austenitization step in which a steel is heated at 900-1,050°C for 60 to 180 seconds and an isothermal transformation step in which thus austenitizied steel is heated at 600-750°C for 20 to 100 seconds.